PROVISIONAL KEY TO THE ENTOLOMA SPECIES OF TASMANIA
BY

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So far about 100 Entoloma species have been recorded from Tasmania, of which some still wait a formal description. This key includes 69 species described in Gates & Noordeloos (2007) and Noordeloos & Gates (2009), as well as those taxa that could be identified with the relevant literature (Horak 2008). More taxa will be added in the near future. This keys will be updated regularly.

1. Pileus white, beige or yellow **Key one**
1. Pileus differently coloured 2.
2. Pileus pink, pinkish red, carmine or with green or olivaceous tinges **Key two**
2. Pileus differently coloured 3.
3. Pileus and/or stipe with blue, blue-grey or violaceous tinges 4.
3. Pileus and stipe pale to dark yellow- or red-brown, brown-grey, grey or blackish 5.
4. Habit tricholomatoid or mycenoid; pileus conical to convex with umbo; clamp-connections present; spores often (sub-) isodiametric with weak angles **Key three**
4. Habit collybioid rarely mycenoid; pileus conico-convex to plano-convex, usually slightly to distinctly depressed at centre, rarely with small acute papilla; clamp-connections absent; spores usually heterodiametric with pronounced angles **Key four**
5. Habit tricholomatoid or mycenoid; pileus conical to convex, usually umbonate, never distinctly umbilicate **Key five**
5. Habit collybioid or omphalinoid **Key six**

Key one: Pileus white, beige or yellow

1. Pileus pure white when fresh 2.
1. Pileus beige or yellow when fresh 7.
2. Habit tricholomatoid with relatively thick flesh; spores isodiametric to subisodiametric, Qav = 1.0-1.1 3.
2. Habit collybioid, mycenoid, or omphalioid, relatively thin-fleshed; spores heterodiametric, Qav > 1.2 5.
3. Appearing in spring under cultivated fruit trees, probably introduced; pileus with micaceous patches; spores 8-12 µm in diameter **E. saundersii**
3. Appearing in summer and autumn in native forest; pileus without micaceous patches, spores 6-8 µm in diameter 4.
4. Fruit bodies small; pileus 15-45 mm, chalky white, opaque; stipe hyaline-watery white, indistinctly fibrous; smell rancid-farinaceous **E. cretaceum**

4. Fruit bodies large; pileus up to 100 mm broad; stipe densely silvery white fibrillose; smell soapy at first **E. albomagnum**
5. Clamp-connections abundant; lamella edge heterogeneous 6.
5. Clamp-connections absent or very rare; lamella edge sterile **E. albidosimulans**
6. Spores irregularly nodulose-angled with 7-9 blunt angles in outline **E. totialbum**
6. Spores regularly 5-6-angled with sharp angles **E. sericellum**
7. Pileus and stipe strong yellow; pigment incrusting **E. sulphureum**
7. Pileus beige; stipe blue; pigment intracellular **E. contrastans**

Key two: Pileus pink, pinkish red, carmine or with green or olivaceous tinges

1. Pileus green or with olivaceous tinges 2.
1. Pileus pink, pinkish red or carmine 4.
2. Pileus and stipe very dark brown-olivaceous **E. obscureovirens**
2. Pileus green to dark green; stipe green or yellow 3.
3. Lamella edge green or blue-green **E. viridomarginatum**
3. Lamella edge concolorous with sides **E. rodwayi**
4. Pileus pink to pinkish red 5.
4. Pileus and stipe deep carmine-red **E. carminicolor**
5. Stipe pink **E. austroroseum**
5. Stipe yellow **E. roseoluteolum**

Key three: Pileus and/or stipe with blue, blue-grey or violaceous tinges

1. Pileus some shade of yellow-, red- or purple-brown, brown-grey, grey or black; stipe blue, blue-grey or violaceous 2.
1. Pileus blue or violaceous; stipe with or without blue or violaceous tinges 6.
2. Lamellae deep yellow 3.
2. Lamellae without yellow tinges 4.
3. Pileus dark red-brown; stipe blue **E. manganaense**
3. Pileus pale brown; stipe white or with slight blue-violaceous tinges **E. mathinnae**
4. Pileus strongly viscid **E. gelatinosum**
4. Pileus dry, innately fibrillose to fibrous 5.
5. Lamellae white then flesh-coloured; pileus greyish ruby to brown with purple tinges (plum-coloured) **E. kermandii**
5. Lamellae dark with lilac or violaceous tinges; pileus blacki with violaceous tinge **E. fuligineoviolaceum**
6. Pileus strongly viscid **E. gelatinosum**
6. Pileus dry or slightly lubricous 7.
7. Pileus velutinous or minutely squamulose 8.
7. Pileus glabrous, fibrillose or fibrous 13.
8. Pileus velutinous; robust species with tricholomatoid or mycenoid habit 9.
8. Pileus velutinous to minutely squamulose; slender, mycenoid species 11.
9. Pileus deep blue; pileipellis a trichoderm of long elements **E. coeruleomagnum**
9. Pileus dark brown mixed with indigo or violaceous tinges 10.
10. Pileipellis a hymeniderm (calliderm); pileus brown mixed with indigo-blue

E. indigoticoumbrinum

10. Pileipellis a trichoderm; pileus with violaceous tinges **E. fuligineoviolaceum**
11. Pileus and stipe deep blue; stipe fibrillose-squamulose all over **E. panniculum**
11. Pileus and stipe with violaceous tinges 12.
12. Stipe polished; spores 8-12 x 9-7.5 µm **E. violascens**
12. Stipe fibrillose; spores (5.5-)6-7 x 5.5-7 µm **E. tomentosolilacinum**
13. Habit mycenoid, very slender, with a thin, relatively long stipe 14.
13. Habit tricholomatoid or mycenoid, but then relatively robust 15.
14. Pileus very pale, almost white, with slightly darker brown centre **E. contrastans**
14. Pileus very dark brown, occasionally with violaceous tinge **E. coerulogracilis**
15. Pileus and stipe deep blue **E. perbloxamii**
15. Pileus brown mixed with violaceous-blue or indigo 16.
16. Lamellae white then flesh-coloured; pileus greyish ruby to brown with purple tinges (plum-coloured) **E. kermandii**
16. Lamellae greyish blue or dark brown-violaceous; pileus dark brown with either blue or violaceous tinges 17.
17. Lamellae dark brown-violaceous; pileus dark brown with violaceous tinges **E. fuligineoviolaceum**
17. Lamellae with greyish blue or greyish violaceous tinges, never dark; pileus dark purple-brown at centre, with indigo-blue tinges towards margin **E. haastii**

Key four: Species with collybioid habit and blue or violaceous tinges in any part of the basidiocarp.

1. Pileus blue, blue-black or violaceous 2.
1. Pileus blackish brown, grey-brown, dark brown, red-brown, purple-brown, yellow-brown, pale brown almost white 7.
2. Spores many-angled, nodulose; stipe with strigose hairs at base **E. uliginicola**
2. Spores not nodulose; stipe without strigose hairs 3.
3. Spores 7-8 x 5-7 µm, subisodiametric with weak angles; basidiocarps with tender pale violaceous tinges **E. tomentosolilacinum**
3. Spores larger 4.
4. Spore length ranging from 8-10.5 µm **E. transmutans**
4. Spores 10-12 µm long or more 5.
5. All parts of fruit body staining orange when bruised; pileus with violaceous-blue tinges that may disappear with age **E. aurantiolabes**
5. No orange staining; pileus persistently blue or violaceous 6.
6. Pileus deeply translucently striate, lamella edge concolorous with sides; cap typically bi-coloured with dark central spot **E. melanophthalmum**
6. Pileus not translucently striate, lamella edge coloured **E. melanocephalum**.
7. Spores > 10 µm long 8.
7. Spores 8-10 µm long 10.
8. Pileus not translucently striate; stipe white, often with delicate grey tinge **E. austroprunicolor**
8. Pileus translucently striate, at least at margin; stipe blue or violaceous-grey 9.
9. Pileus brown; stipe blue to blue-grey; lamella edge brown **E. asprellopsis**

9. Pileus dark grey to grey-black; stipe grey-violaceous; lamellae edge concolorous with side **E. griseosquamulosum**
10. Pileus pallid beige to very pale brown **E. albidocoeruleum**
10. Pileus dark brown to blackish brown 11.
11. Pileus conical with acute papilla, dark brown velutinous; lamellae edge deep blue; stipe deep blue **E. natalis-domini**
11. Pileus umbilicate, entirely black at first then yellow-brown with small but very conspicuous blackish brown, erect squamules; lamella edge deep carmine to violet-black; stipe dark grey, polished **E. sassafras**

Key five: Habit mycenoid or tricholomatoid

1. Spores cuboid or cruciform 2.
1. Spores differently shaped 5.
2. Spores cuboid **E. procerum**
2. Spores cruciform 3.
3. Spores small, 6.5-9 x 5.5-8.0 µm **E. brevispermum**
3. Spores larger 4.
4. Cheilocystidia present, lageniform to fusiform, 30-90 µm long **E. stellatum**
4. Cheilocystidia absent **E. conferendum**
5. Habit tricholomatoid, thick-fleshed 6.
5. Habit mycenoid; thin-fleshed 7.
6. Lamellae deep yellow; in native forest **E. mathinnae**
6. Lamellae white then sordid pink; in gardens, parks, etc. under fruit trees **E. clypeatum**
7. Pileus glabrous 8.
7. Pileus fibrillose, often with tomentose or fluffy centre, of entirely tomentose to squamulose 11.
8. Spores isodiametric, Qav = 1.0-1.1, 9-13 x 8-12 µm **E. convexum**
8. Spores heterodiametric, Qav > 1.2 9.
9. Basidiocarps with tough consistency; spores 10-13 x 8-10 µm **E. obscureotenax**
9. Basidiocarps brittle; spores < 10 µm long **E. psilocyboides**
10. Spores isodiametric **E. parasericeum**
10. Spores heterodiametric 11.
11. Pileus fibrillose, often with fluffy to tomentose centre 12.
11. Pileus tomentose, squamulose or strigose all over 18.
12. Cheilocystidia lecythiform with moniliform, capitate neck **E. porphyrescens**
12. Cheilocystidia differently shaped 13.
13. Spores small, 6-7 x 5-7 µm; pigment incrusting **E. fuligineopallescens**
13. Spores much larger; pigment intracellular or both intracellular and incrusting 14.
14. Pileipellis with incrusting pigment and intracellular pigment 15.
14. Pileipellis with intracellular pigment only 17.
15. Smell indistinct; intracellular clots, pigment agglutinated particularly in subcellular subpellis; clamp-connections absent; spores 7-10 x 6-8 µm **E. maldea**
15. Smell strong, aromatic, sweet, like fruit drops or bubble-gum; intracellular pigment diffuse 16.

16. Pileus and stipe greyish brown; stipe fibrillose; spores 9-11 x 7-9 µm, regularly 6-7-angled in side-view **E. aromaticum**
16. Pileus brown with vinaceous hue, strongly contrasting with the honey-yellow, polished stipe; spores complex, sometimes twisted, 9.5-14 x 6.5-9 µm **E. chrysopus**
17. Spores with blunt angles, somewhat irregular; cheilocystidia 20-50(-65) x 4-12 µm, lageniform to tibiiform; pileus and stipe grey to grey-brown **E. fumosopruinosum**
17. Spores pronouncedly 5-6 angled; cheilocystidia absent; pileus reddish brown; stipe pale brown **E. fibrosopileatum**
18. Spores 7-9 x 7-8.5 µm **E. lepiotoides**
18. Spores larger 19.
19. Pileus velutinous, breaking up into small squamules; cheilocystidia large, lageniform; spores 10-14 x 7-9 µm **E. sepiaceovelutinum**
19. Pileus with strigose tufts of erect hairs; cheilocystidia absent; spores 10-12 x 7-8 µm **E. strigosum**

Key six: Pileus and stipe pale to dark brown, yellow-brown, red-brown, brown-grey or blackish

1. Habit omphalioid with distinctly decurrent lamellae 2.
1. Habit collybioid 6.
2. Lamella edge with conspicuous fusiform to lageniform cheilocystidia, up to 100 µm long; pigment intracellular **E. choanomorphum**
2. Lamella edge fertile without cystidia; pigment incrusting, sometimes also intracellular 3.
3. Fruit bodies resembling a *Camarophyllus* with distant, thickish, waxy lamellae; spores very large, heterodiametric, 8-16 µm long, irregularly shaped with very pronounced angles **E. camarophyllus**
3. Fruit bodies different, lamellae normally spaced, or, if distant, then thin, not waxy; spores smaller, isodiametric, about 7.5-9.0 µm in diameter 4.
4. Pileus pale to moderately dark brown, smooth, deeply translucently striate; lamellae distant **E. austrorhodocalyx**
4. Pileus dark grey-brown, fibrillose to tomentose, not translucently striate; lamellae normally spaced 5.
5. Pileus densely tomentose then squamulose with minute, erect squamules **E. crinitum**
5. Pileus hoary with loose fibrils, somewhat concentrically zoned **E. percrinitum**
6. Basidia clamped; pileipellis with fine incrustations **E. readiae**
6. Basidia not clamped; pileipellis with intracellular pigment 7.
7. Lamella edge coloured 8.
7. Lamella edge concolorous with sides 10.
8. Pileus yellow-brown, tan-brown, or bronze-brown; stipe frequently with a conspicuous orange blotch **E. rufobasis**
8. Pileus dark brown-black or sepia-brown 10.
9. Spores 6-10 x 5-7 µm **E. saponicum**
9. Spores 10-13 x 7-8 µm **E. phaeomarginatum**
10. Pileus rather pale brown with darker centre (“eye”) 11.

10. Pileus moderately dark to dark brown 12.
11. Smell none; cheilocystidia 40-110 x 5-9, slender, cylindrical; pileus pale brown; stipe white **E. tenuicystidiatum**
11. Smell of bleach, cheilocystidia 20-40 x 5-12 µm, clavate **E. stramineopallescens**
12. Cheilocystidia up to 90 µm long, variably shaped from clavate to fusiform, utriform or sphaeropedunculate **E. cystidiosum**.
12**.** Cheilocystidia up to 50 µm long, cylindrical, fusiform or clavate **E. aurantiolabes**

Check-list of *Entoloma* species known from Tasmania (state of knowledge may 2009).

E. albidocoeruleum G.Gates & Noordel., Persoonia 19: 28. 2007.
E. albidosimulans G.Gates & Noordel., Persoonia 19: 23. 2007.
E. albomagnum G.Gates & Noordel., Persoonia 19: 2. 2007.
E. aromaticum E. Horak
E. asprellopsis G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. aurantiolabes G.Gates & Noordel., Persoonia 19: 25. 2007.
E. austroprunicolor G.Gates & Noordel., Persoonia 19: 19. 2007.
E. austrorhodocalyx G.Gates & Noordel., Persoonia 19: 31. 2007.
E. austroroseum G.Gates & Noordel., Persoonia 19: 20. 2007.
E. breivispermum G.Gates & Noordel., Persoonia 19: 13. 2007.
E. camarophyllus G.Gates & Noordel., Persoonia 19: 30. 2007.
E. carminicolor G.Gates & Noordel., Persoonia 19: 21. 2007.
E. choanomorphum G.Gates & Noordel., Persoonia 19: 33. 2007.
E. chrysopus G.Gates & Noordel., Persoonia 19: 9. 2007.
E. clypeatum (L.) P.Kumm.
E. coeruleogracilis G.Gates & Noordel., Persoonia 19: 7. 2007.
E. coeruleomagnum G.Gates & Noordel., Persoonia 19: 6. 2007.
E. conferendum (Britz.) Noordel.
E. contrastans G.Gates & Noordel., Persoonia 19: 8. 2007.
E. convexum G. Stev.
E. cretaceum G.Gates & Noordel., Persoonia 19: 1. 2007.
E. crinitum E. Horak
E. cystidiosum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. fibrosopileatum G.Gates & Noordel., Persoonia 19: 14. 2007.
E. fuligineopallescens G.Gates & Noordel., Persoonia 19: 15. 2007.
E. fuligineoviolaceum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. fumosopruinosum G.Gates & Noordel., Persoonia 19: 12. 2007.
E. gelatinosum E. Horak
E. griseosquamulosum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. haastii G. Stev.
E. indigoticoumbrinum G.Gates & Noordel., Persoonia 19: 4. 2007.
E. kermandii G.Gates & Noordel., Persoonia 19: 5. 2007.
E. lepiotoides G.Gates & Noordel., Persoonia 19: 17. 2007.
E. manganense G.Gates & Noordel., Persoonia 19: 3. 2007.
E. mathinnae G. Gates, Horton & Noordel.
E. melanophthalmum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. natalis-domini G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. obscureovirens G.Gates & Noordel., Persoonia 19: 11. 2007.
E. obscureotenax G.Gates & Noordel., Persoonia 19: 11. 2007.
E. obscureovirens G.Gates & Noordel., Persoonia 19: 22. 2007.
E. panniculus (Berk.) Sacc.
E. pasasericeum E. Horak

E. perbloxamii Noordel, D.L.V. Co, G. Gates and Morgado, Cryptogamie-Mycologie 30. 2009.
E. percrinitum G.Gates & Noordel., Persoonia 19: 32. 2007.
E. phaeomarginatum E. Horak
E. porphyrescens E. Horak
E. procerum G. Stev.
E. psilocyboides G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. readiae G. Stev.
E. rodwayi (Massee) E. Horak
E. roseoluteolum G.Gates & Noordel., Persoonia 19: 24. 2007.
E. rufobasis G.Gates & Noordel., Persoonia 19: 26. 2007.
E. saponicum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. sassafras G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. saundersii (Fr.) Sacc.
E. sepiaceovelutinum G.Gates & Noordel., Persoonia 19: 18. 2007.
E. sericellum (Fr.) P. Kumm.
E. stellatum G.Gates & Noordel., Persoonia 19: 16. 2007.
E. stramineopallescens G.Gates & Noordel., Persoonia 19: 27. 2007.
E. strigosum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. sulphureum E. Horak
E. tenuicystidiatum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. tomentosolilacinum G.Gates & Noordel., Persoonia 19: 29. 2007.
E. totialbum G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. transmutans G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. ulinginicola E. Horak
E. violascens G.Gates & Noordel., Cryptogamie-Mycologie 30. 2009.
E. viridomarginatum (Cleland) Horak